

# TELECONTROL®

The control concept for operating management

## WHAT IS TELECONTROL?

Telecontrol is a highly flexible system of information handling and control which is being used in nearly every branch of industry.

Telecontrol is data collection, storage, display and retrieval . . . performed at electronic speed. Telecontrol takes many forms and can be applied in an unlimited number of ways to solve production, data handling and control problems.

### Telecontrol can:

- Monitor and control total factory production
- Meter individual production operations
- Collect and prepare basic input for computers and data processing systems
- Provide automatic variable program control

Telecontrol increases productivity by placing direct controls on all types of production operations and services. Through faster information handling, it anticipates production problems, alerts management to costly delays, prevents overruns and shortages. It permits improved scheduling and accurate data collection on the status of direct and indirect labor.

*Since problems are revealed as they occur, Telecontrol enables operating management to take immediate corrective action.*



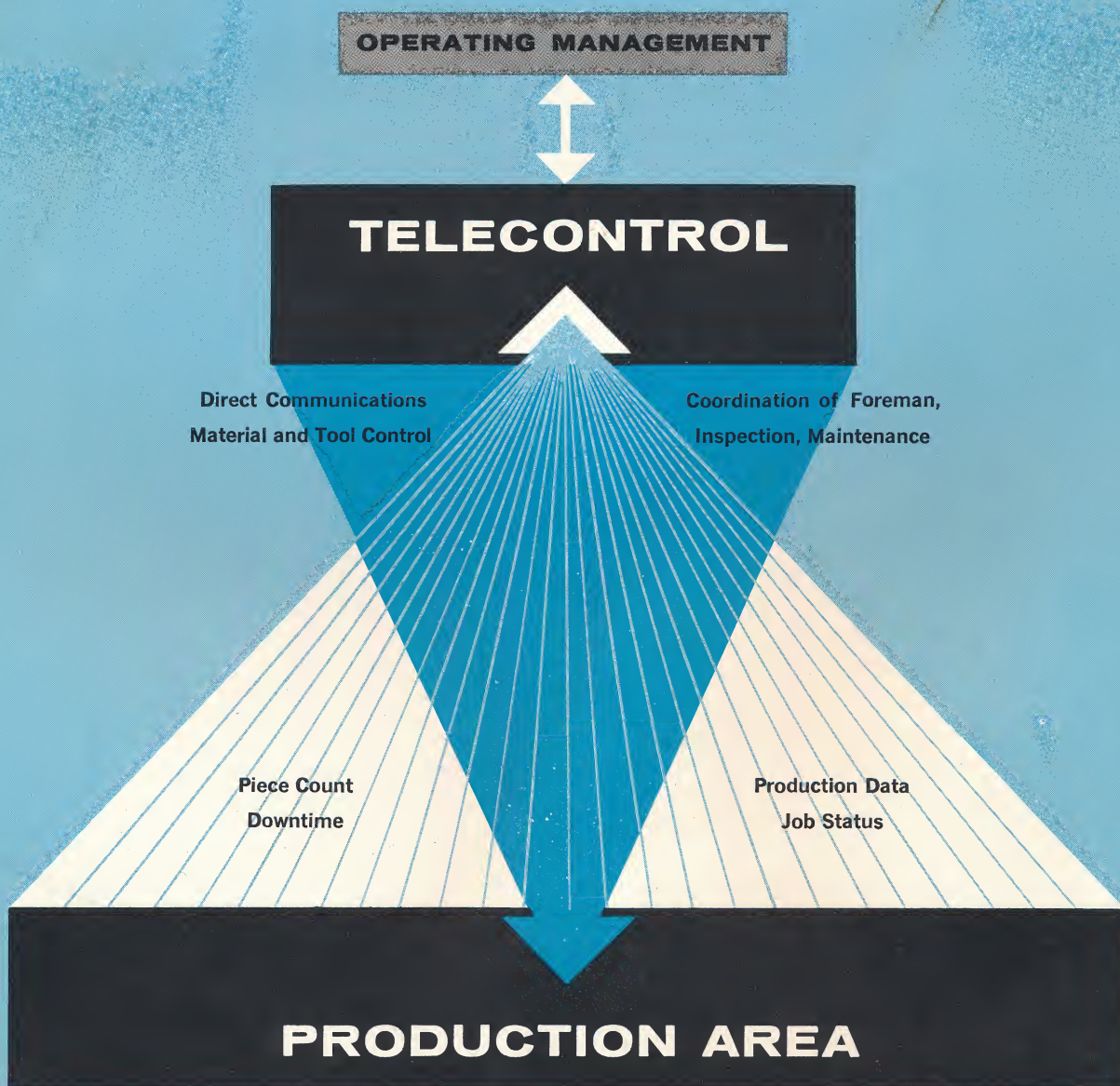
# TELECONTROL:

*the management system that...*

- Increases productivity of direct labor
- Improves utilization of capital equipment and indirect labor
- Decreases in-process inventory and raw material
- Reduces overhead expense
- Produces accurate records in any form desired
- Provides more efficient use of supervisory personnel

## THE TELECONTROL CONCEPT

This diagram shows the essential data handling and control functions of a Telecontrol system. See the enclosed technical data sheets for detailed information on specific types of Telecontrol.





# TELECONTROL<sup>®</sup> the control system for operating management

SERIES

412

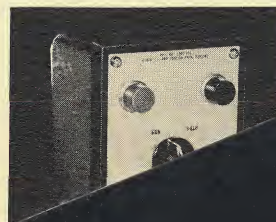
Series 4100 is a factory information handling system designed to provide management with the means to exercise more effective supervisory control of manufacturing operations.

Series 4100:

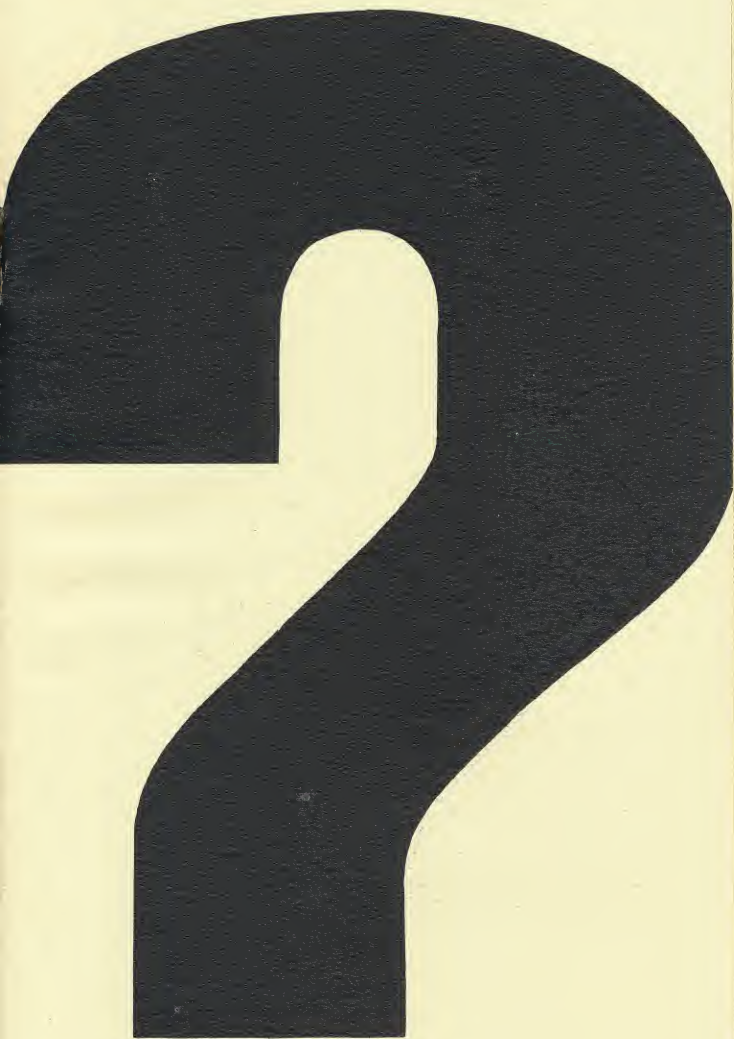
- Informs management of the status of machines and work in progress at any time. Costly shortages and overruns are reduced.
- Aids in the proper assignment of men, machines and orders.
- Provides central control over materials, tools and services, enabling them to be in the right location at the right time.
- Produces data for cost analysis and for the preparation of the factory payroll in a form compatible with data processing equipment.
- Provides instantaneous data on efficiency and shop effectiveness both during the production run and at the completion of the job. It permits machine utilization studies.
- Makes possible effective scheduling since all data on status, efficiency, available men and machines is displayed and stored in readily accessible form.

Series 4100 means improved management control of production.

## WHAT'S TELECONTROL



*See this page for  
complete listing of all  
**TELECONTROL** systems.*



## WHAT'S TELECONTROL





## WHAT'S TELECONTROL?

Telecontrol is a command post in the factory. It tells those responsible for the factory's successful operation how they're doing. Without such knowledge, it is impossible to run the factory intelligently.

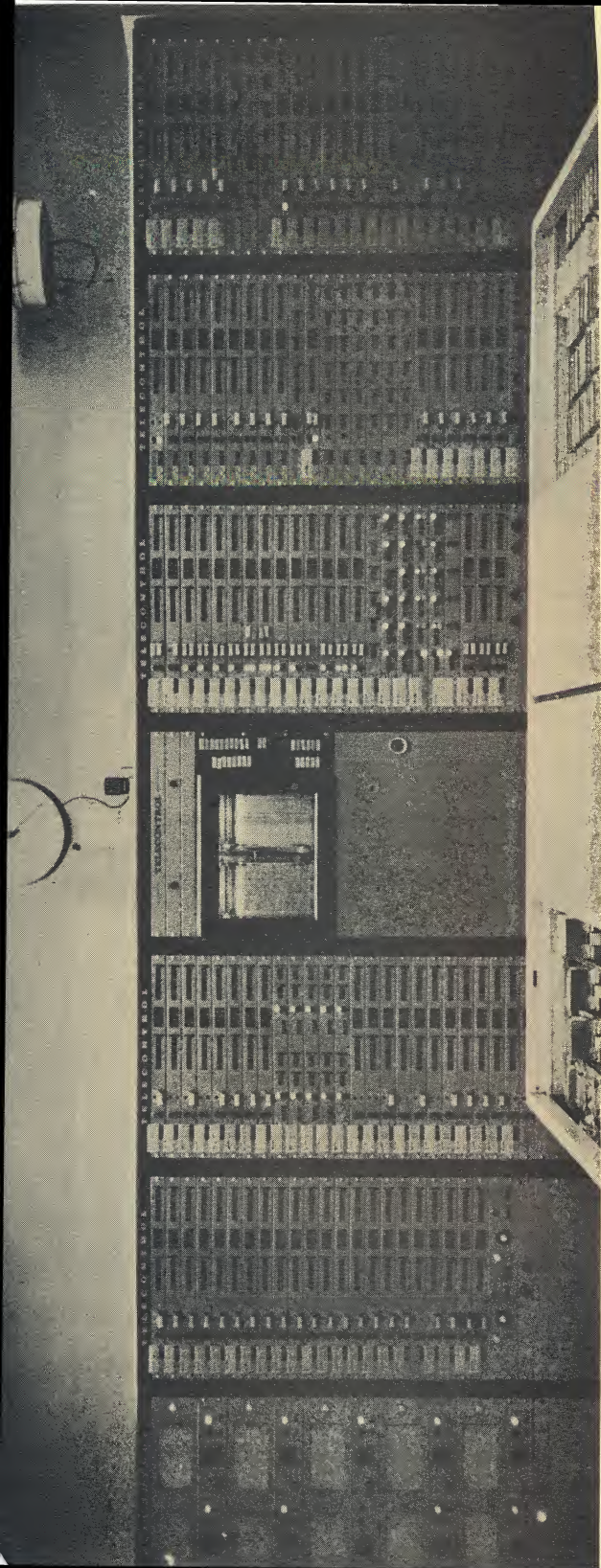
No doubt you know the function of an army command post (or its naval counterpart, the Combat Information Center, or CIC). In a phrase, it is the nerve center of the army regiment, or aircraft carrier, or whatever the unit may be.

The command post knows what the unit's orders are, what is being done to carry them out, where each of its elements is stationed and what each is doing. It knows what other regiments (or naval vessels, as the case may be) are doing and where they are. It knows what help it may expect from the Air Force, artillery, medics, engineers, quartermaster.

There are many peacetime types of command posts, for example, the airport control tower and the control room of an oil refinery. The control booth of a television studio pulls together all the loose ends involved in putting the finished TV show on your living room screen. A recent and vivid example is the central control exercised over the flights of our astronauts.

Telecontrol does a similar job in the factory.

Telecontrol Command Post





## WHY DO WE NEED IT?

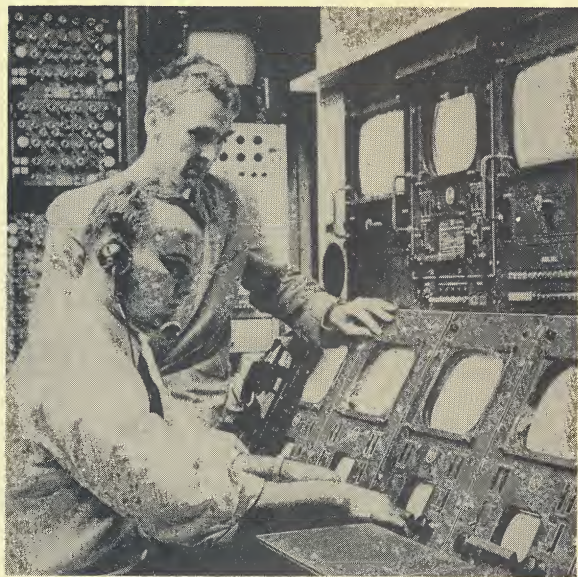
Because our factory is spread out over a large area, it is extremely difficult, if not impossible, to know what is going on in every department. And operations cannot be directed very well without accurate, impartial, up-to-the-minute information.

Manufacturing is a sequential operation. In other words, the output of one machine becomes the input of the next machine; a part goes from Machine No. 1 to Machine No. 2 to Machine No. 3 and so on. If something happens to interrupt the operation of Machine No. 1, all the machines which follow it may be put out of operation. This means that people and machines are idle. No company can survive if this happens very often.

Telecontrol points out bottlenecks which slow down or halt production as soon as they occur. Obviously, this is useful to all of us.



Airport control tower regulates incoming and departing flights. Airlines cannot do without it.



In TV control room, director sees what each camera sees, selects best view for your screen.



As factories become bigger and more complex, new and more modern methods of keeping track of what is going on in them are needed.



# WHAT DOES TELECONTROL MEAN TO YOU?

Our company's most important asset is its people. If our firm has achieved any success, if it has made any progress, your skills and abilities had had much to do with it. To assure further advances, it is important that we employ your skills and abilities to the best possible advantage.

Our capacity to do so will benefit not only the owners of the company, but will benefit you as well. Our ability to provide steady employment and to pay wages at a reasonable level depends in part on how well we run the plant. A poorly managed factory falls behind its competitors who grab the orders. And the inefficient plant suffers layoffs, pay cuts, and in many cases it is forced to close down.



Foreman responds to operator's call, discusses problem by phone with the Telecontroller.

Telecontrol helps us run a tight ship. It reduces interruptions in production. It improves the scheduling of work. It simplifies expediting. This is important to all of us. For no plant can be a good one in which to work unless it earns the right to exist in the competition of the marketplace.

Telecontrol recognizes the importance of the production worker. In effect, it makes each such worker the production manager of his machine. When you need materials, when you need a die adjustment or a new die, you call for them. And you don't have to leave your machine to look for the foreman. All you have to do is throw a small toggle switch on your machine. Telecontrol helps you.



There is one control panel for each work station covered by the Telecontrol system.



# HOW DOES TELE CONTROL WORK?

1. Each work station tied into the Tele-control system has a control box (see cover) equipped with a toggle switch, signal lights, a phone jack, a downtime switch, and a reset button.

2. If, for any reason, you need assistance, you flip the toggle switch. This activates a red signal light on the control box and a corresponding light in the central control room. The Telecontroller also is alerted by an audible signal. Thus he knows you need help.

3. Using the plant PA system, the Telecontroller directs the appropriate foreman to your station.

4. The foreman discusses the problem with you. If he needs assistance, he plugs a portable phone (which he carries in a holster on his belt) into the jack in the control box. He tells the Telecontroller to send a die-setter, or stock chaser, or electrician, or whoever else is required, to correct the problem and he gives instructions on what parts or tools the workman should bring with him.

5. If it is necessary to put you on downtime, the foreman activates the downtime switch with a special key. All downtime is automatically registered in the Telecontrol room, insuring you of full credit.

6. If a machine is going to be out of commission for any period, the foreman arranges with the Telecontroller to transfer you to another assignment.

7. When production is resumed, either you or the foreman pushes the reset button. This shuts off the downtime counter and activates other counters which record productive time and units produced.

8. When the production run is completed, a signal light flashes on the control box and in the control room. This helps to prevent costly overruns and underruns.

9. In addition to revealing bottlenecks promptly so they can be eliminated, the counters provide accurate data on which to calculate costs and schedule work.

These are the major features of Telecontrol.



The Telecontrol room is the command post, the nerve center of the modern factory.

It enables the factory to run more smoothly and that's good for everybody.



## WHAT DO PEOPLE SAY ABOUT TELECONTROL?

Since there are so many Telecontrol installations and so many people have had experience with it, it is easy to obtain opinions on the subject. Here are a few:

Foreman: "It frees the foreman from a mess of paperwork so that he can do what he was hired to do: direct his department and train his people."

Punch press operator: "I like the accurate piece count Telecontrol gives. Now I know I'm getting credit for what I do."

Gear hobber operator: "The company must be trying to be progressive. That's good! I like to be on a smart team."

Milling machine operator: "My job must be pretty important because the company is spending a lot of money to give me better service."

Personnel director: "It has improved labor relations. You know, a lot of labor trouble is the result of minor irritations. Telecontrol brings these irritations to light, so they can be corrected."

Shop steward: "There's no favoritism. Everybody gets treated the same in a Telecontrol shop."

Screw machine operator: "I used to work for the foreman. Now he works for me. All I do is flip the Telecontrol switch and he reports to me!"

Plant manager: "When we decided to install Telecontrol, our employees naturally wanted to know what it was all about. So we took a committee to look over a nearby installation. The committee members found that Telecontrol was what we had told them it was. After that they were in favor of it."

## WHO'S USING IT?

More than 85 companies in 20 industries in 18 states are using Telecontrol. In many cases both management and employees have been enjoying its benefits for years.

Among the users are:

Albion Malleable Iron Foundry  
A. O. Smith Corporation  
Bendix Corporation  
Corning Glass Works  
Doehler Jarvis Die Casting  
Ford Motor Company  
General Electric Company  
General Motors  
Maytag Corporation  
Shwayder Bros. (Samsonite)  
Sunbeam Corporation

Among the industries using Telecontrol are:

Appliance	Glass
Automotive	Hardware
Ball Bearing	Lighting
Electrical	Plastic Products
Farm Machinery	Precision Instrument
Foundries	Rubber and Tire

## WHAT SHOULD YOU DO?

More than 25,000 employees in some 100 plants, almost all union-organized, are working with Telecontrol and are happy with it. Telecontrol is no longer unusual.

If you have any questions about Telecontrol, discuss them freely with your supervisor. If he doesn't have all the answers, he knows how to get them.







**TELECONTROL<sup>®</sup>:** the control system for operating management

**SERIES** **4100**

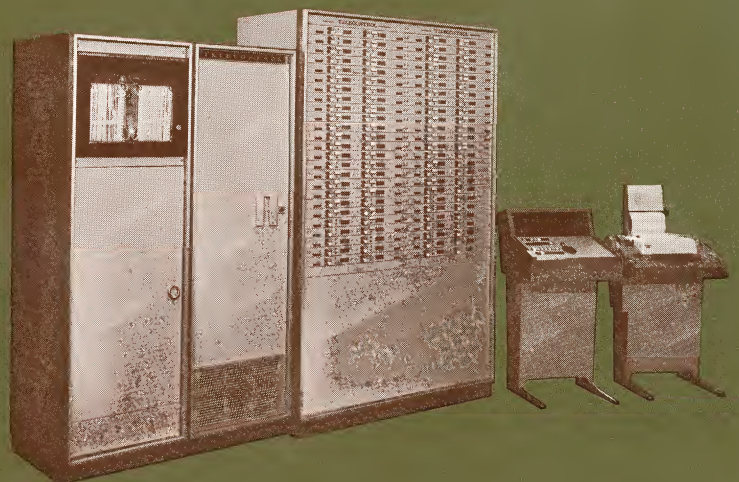
**ELECTRONIC PRODUCTION MONITORING SYSTEM**

Series 4100 is a factory information handling system designed to provide management with the means to exercise more effective supervisory control of manufacturing operations.

Series 4100:

- Informs management of the status of machines and work in progress at any time. Costly shortages and overruns are reduced.
- Aids in the proper assignment of men, machines and orders.
- Provides central control over materials, tools and services, enables them to be in the right location at the right time.
- Produces data for cost analysis and for the preparation of the factory payroll in a form compatible with data processing equipment.
- Provides instantaneous data on efficiency and shop effectiveness both during the production run and at the completion of the job. It permits machine utilization studies.
- Makes possible effective scheduling since all data on status, efficiency, available men and machines is displayed and stored in readily accessible form.

Series 4100 means improved management control of production.





## HOW SERIES 4100 WORKS

Series 4100 may be functionally described as three sub-systems which when combined provide an integrated Electronic Production Monitoring System.

**Status Display** Information such as productive status of machine, machine designation, job assignment, employee assignment, pieces produced, elapsed productive time, and elapsed non-productive time is instantaneously available in the form of visual display or hard copy. A breakdown of non-productive time by reason and exception reporting of jobs running below standard can be provided if desired.

**Signaling and Communication** When status display indicates management action is needed, phones, voice paging and signaling are used to relay instructions and close the communication loop between production floor, control center and supporting services.

**Data Collection** Automatic source-generated data such as pieces produced, productive time and non-productive time— together with internally stored identification data such as job, employee and machine number, and job standard — provides the necessary information for cost records, payroll calculations and efficiency reporting. Such information is stored on a magnetic drum and is available for instantaneous visual display, while the job is in production. Depending upon the specific application, all data collected by the system can be read out into paper tape, hard copy printer, punched card, magnetic tape or if desired interfaced directly with a computer.

### TYPICAL COMPONENTS OF THE SERIES 4100:

**1. Piece Sensor** Engineered to fit the specific application. Ranges from simple switches to logic sensing using a wide variety of detection techniques such as impact, proximity, pneumatic and photoelectric.

**2. Work Station Terminal** One terminal is installed at every sensing station to control signaling and voice communications between each work station and central control, and to transmit piece count, productive time or downtime signal.

**3. Display Cabinet** Used to display for each work station monitored such data as operating status, requests for assistance, job completion, employee and job assignment for each machine.

**4. Count Memory Unit** Contains the electronic arithmetic unit, data storage drum and the system's electronic control circuitry. The data storage drum is divided into two separate storage areas: *working area*, connected to an operating work station and collecting working data, and *transaction buffer* which provides storage data for completed jobs. By storing such data in the buffer, complete flexibility is provided for output devices of any speed.

**5. Data Output Unit** Any standard output device may be used with the Series 4100, including printers, paper tape punches, magnetic tape units, card punches and central processing units.

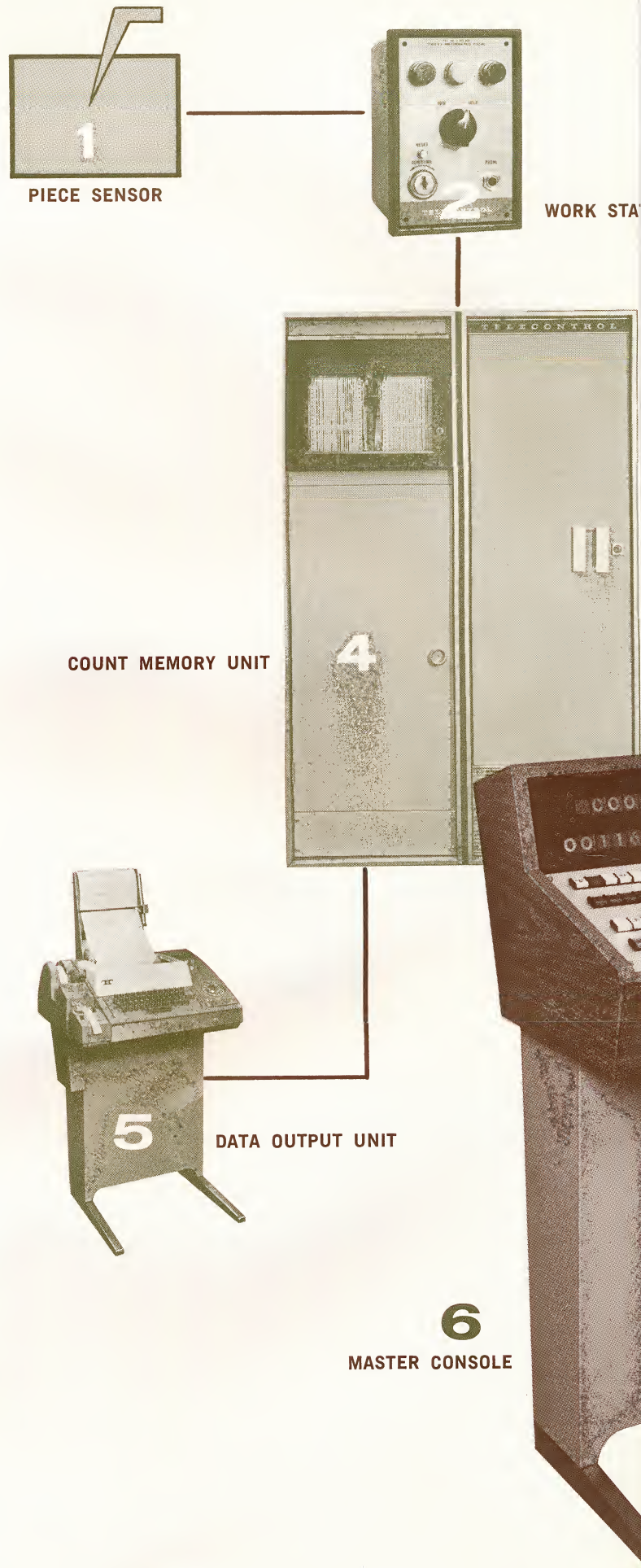
**6. Master Console** The master console controls the input, interrogation or display and output of all data from the system. Among its features are:

**Input Keyboard.** Provides for the insertion of such data as job and operation number, employee number, cost center and downtime reasons.

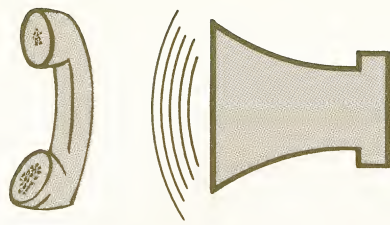
**Automatic Search.** Eliminates necessity for control room operator to look up address location information.

**Visual Data Display.** The control room operator may initiate an inquiry for any information stored in the count memory unit. This information can be displayed on the master console unit or can be printed on the output printing unit. When interrogating for time or unit count, advancing of the counters can be observed as input counts are made. There is no interruption of incoming data during interrogation of drum storage.

**Automatic as well as manual control of readout.** Since there are various types of readout (such as end of shift, end of job, request for information, etc.), the master console provides for both automatic and manual control of readout.

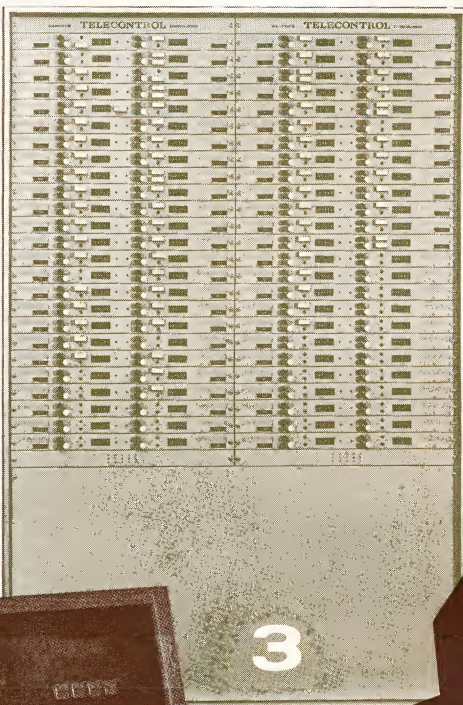






ION TERMINAL

COMMUNICATIONS SYSTEM



DISPLAY CABINET



## ADVANTAGES OF SERIES 4100 ELECTRONIC PRODUCTION MONITORING SYSTEM

Series 4100 gives operating management complete control over the manufacturing process. It does this by monitoring, recording and displaying each production operation and preparing coordinated information for electronic data processing equipment on a real time or batch processing basis. Some of the specific advantages of the system are:

### INCREASED PRODUCTIVITY

This is the result of reducing non-productive time. Instantaneous status display and communications coupled with precise information regarding non-productive incidents provide the means for increasing production. Jobs that are not efficient are pinpointed while running so corrective action may be taken.

### MORE ACCURATE RECORDS

All lost time is recorded in central control. Downtime is accumulated, producing accurate production and cost data by part number, machine and department.

### BETTER UTILIZATION OF INDIRECT LABOR

Timekeepers and production expeditors are no longer needed on the shop floor. Material handlers, inspectors and maintenance personnel are directed immediately to problem areas. In addition, Series 4100 communications system allows all roving personnel to report in as often as necessary.

### CONTROL OF SCHEDULING

Series 4100 permits the right part to be run at the right time, eliminating overruns and under-runs which show up as unexpected parts shortages. In-process inventory is greatly reduced.

### BETTER SUPERVISOR EFFICIENCY

Assisted by central control, foremen receive analytical data regarding their operations. Shop paperwork is reduced, enabling foremen to concentrate on production problems.

### IMPROVES DATA PROCESSING EFFICIENCY

Series 4100 collects and pre-processes raw production data for rapid input to the data processing system. Input data is more accurate because of automatic entry of time and piece data and central input of associated job identification data.

### BETTER MANAGEMENT EFFICIENCY

A visit to central control is equivalent to a plant tour for management and often reveals areas where future savings can be made.



**TELECONTROL has been successfully applied in the following industries:**

Automotive  
Appliances (large and small)  
Bearings  
Tires  
Plastic Containers  
Custom Job Shops  
Luggage  
Business Machines

Hand Tools  
Steel Fabrication  
Packaging  
Glass  
Insulating Materials  
Fasteners  
Phonograph Records  
Housewares

plus many others

**The following is a partial list of manufacturing processes employed by TELECONTROL users:**

Metal Stamping and Forming  
Forging  
Foundry  
Die Casting  
Plastic Molding  
Rubber Molding  
Metal Seamless Tubing  
General Purpose Machining  
Grinding  
Glass Forming



**TELECONTROL** DIVISION

Hancock Telecontrol Corporation 143 Sound Beach Avenue Old Greenwich, Connecticut

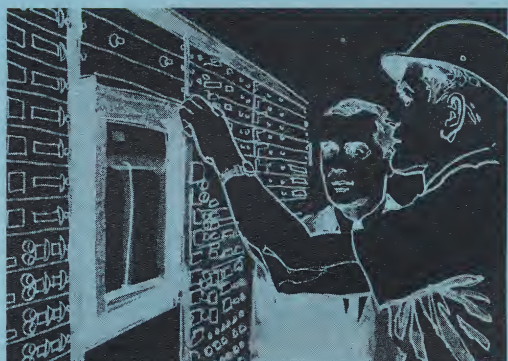


# A tool for management

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TELECONTROL  
CORPORATION





# A tool for management— the Telecontrol System for manufacturing control



## A management tool

Telecontrol is a custom-programmed computer system for manufacturing control providing centralized monitoring, communication and collection of production data. As a management tool, Telecontrol now makes it realistically feasible to implement a production schedule and closely monitor its progress on an on-line, real-time basis.

In many plants manufacturing and production control systems have operated with the same basic techniques for the past 20 years. Now Telecontrol offers manufacturing management the first true breakthrough in new tools for directing and controlling production operations effectively, efficiently and economically. Telecontrol eliminates those problems which have prevented management from utilizing the real benefits of data processing for decision-making: unreliable, slow data collection and inefficient plant communications.

## Who can use it?

It is best suited to firms which manufacture discrete, integral units by production processes which lend themselves to data recording. Telecontrol makes it possible to centrally collect all essential data on the manufacturing process and provides a method for total communication and subsequent management control. Hundreds of manufacturers in the United States and abroad — automotive, tires, glass, packaging, metal fabrication, plastics, business machines, bearings, appliances, hand tools, etc. — are using Telecontrol to improve over-all plant operating efficiency and profits.



## The central control concept

The complete in-plant communications network, which is part of the Telecontrol System, permits management decisions or instructions to be relayed immediately to the responsible shop personnel. All production data is continuously monitored, and the operational status of all work stations is displayed on an exception basis.

Based on the collected data and visual display, control center personnel are immediately aware of situations which may disrupt the schedule or cause down-time; operating decisions by foremen can be made quickly, based on the knowledge of up-to-the-minute information available from the control center and their decisions quickly implemented through the communication system.

Here is a typical example: Three machine operators all in different departments need an electrician at the same time, yet only one electrician is available. The foremen are not in a position to judge the relative urgency of the three requests. But control center personnel, using knowledge of the overall production schedule and current machine data, can establish the priority of assignment quickly, and communicate the decision immediately to the proper supervisory personnel.

As the above example suggests, a foreman cannot be expected to make independent oper-

ating decisions affecting the overall plant schedule. His interdepartmental scheduling is usually rudimentary because of the heavy demands placed on him as an information source for quality, methods, operator problems, time-keeping, expediting, dispatching, etc. Secondly, he may not be trained in the most efficient methods of machine loading.

As an answer to the problem, many firms are centralizing control of the schedule, thereby relieving the foremen of the "clerical" functions necessary to become an information source. Control of the schedule is accomplished by splitting the production control function into two segments: planning and implementation. In planning, the long-range plans and short-range daily or weekly departmental schedules are created; in implementation, the control center executes the detailed schedule and makes the necessary changes due to unexpected situations. The foremen's knowledge on set-up mix, etc. is still utilized by the control center in the assignment of jobs. The foremen are notified on an exception basis of their trouble spots as indicated by the Telecontrol status display. Production data is automatically collected with no effort on their part. Service personnel, such as set-up and maintenance staffs, are provided on request by foremen through the communication system. Thus, the foremen can devote more time to their real job of motivating and training their personnel.

## Which manufacturers can benefit most from Telecontrol?

Cost control-conscious management has been particularly successful in reaping the many benefits of Telecontrol. It is a manufacturing control system which can be tied in smoothly

with other existing in-plant data processing systems to provide the maximum utilization of men, machines and materials.

## What are the benefits of Telecontrol?

Telecontrol helps management achieve several prime objectives:

- On-schedule deliveries
- Increased factory productivity
- Improved effectiveness of production management
- Efficient inventory control
- Improved employee morale
- Better data reliability

**On-Schedule Deliveries** Telecontrol keeps production on-schedule because it minimizes production delays—caused by parts shortages, machine breakdowns, work overloads, tool availability and worker inefficiency—by warning of their occurrence more quickly and expediting their correction.

**Increased Factory Productivity** Telecontrol keeps management in control of costs by reducing the non-productive time. Telecontrol provides current and continuous information on production rate and status, immediately indicates machine breakdowns and other stoppages, and provides a closed-loop communica-



tions system for fast, corrective action. Telecontrol also lowers indirect costs by reducing the need for large staffs of clerical personnel, timekeepers, expeditors, etc., and by improving the efficiency of supervisory, maintenance and materials-handling personnel.

**Improved Effectiveness of Production Management** With Telecontrol, plant management can exercise real-time operational control over production activity. The hour-by-hour, and even minute-by-minute, status of production on the manufacturing floor is instantaneously available. Important operating decisions can be made more quickly, more knowledgeably. Problems can be anticipated, workloads smoothed out, emergency changes handled more efficiently.

**Efficient Inventory Control** By keeping planners constantly informed of the status of work in production, Telecontrol makes it possible to adjust production schedules promptly and maintain minimum operating inventories. By providing almost instantaneous information on

work status, machine breakdowns, parts shortages, job overloads, etc., scheduling becomes more responsive to daily demands and inventory can be adjusted to lower levels. Large, "protective" in-process inventories are used to minimize the effect of unexpected production delays and errors.

**Improved Employee Morale** In both day work and incentive shops, Telecontrol helps to boost employee productivity, raise morale and reduce employee grievances over work efficiency and output. Automatically-recorded piecework production also proves to increase employee satisfaction with records on which performance is based. Plants using Telecontrol have found it accepted by employees and union officials.

**Better Data Reliability** Telecontrol provides rapid and reliable input of more useful labor, production control and payroll data in format compatible for real-time or batch processing runs on in-plant or service bureau electronic data processing systems.

## What benefits can Telecontrol provide for you?

The following companies are representative examples of the savings which have already been achieved with Telecontrol.

**Full Return on Investment — Plus More Savings** Westinghouse Appliance Division: "The Telecontrol System not only has paid for itself in a year but, in the year since, has saved twice as much money as management expected it would. The system monitors 200 punch presses, cutting down on the cost of timekeeping, downtime, die-setting time, and materials handling. Moreover, much of the red tape and legwork formerly required to keep track of the machines' production has been eliminated."

**Plant Downtime Reduced** Albion Malleable Iron Co.: "Through the Telecontrol's knowledge of downtime occurrences, faster maintenance service and preventive maintenance efforts, total plant downtime was reduced 17.1%."

**Improved Worker Efficiency** Sunbeam Corporation: "In one punch press department, represented by Telecontrol worker efficiency reports, a substantial increase in efficiency has resulted since the system was installed. Under our incentive system our operators have increased their earnings a proportionate amount. In the reports operators are listed in order of efficiency. Percentages for individuals, and each department as a whole, are also figured. These weekly sheets are plotted on a graph

showing, over a period of time, if efficiencies have increased or decreased."

**More Effective Equipment Utilization** Bendix Automotive Products Division: "We have effected some major improvements in efficiency and operating costs, particularly in an upgrading of equipment utilization. Production scheduling can be planned on a shorter time-interval basis, thus reducing downtime for changing tooling on rush requirements."

**More Accurate Plant Inventory and Maintenance Record-Keeping** Kelly Springfield Tire Company: "Each of our tire-making machines is tied in with Telecontrol, which keeps a record of the number of tires it produces per shift, whether any downtime has been necessary, and for how long. Plant inventory and maintenance are easily kept up to date with this automatic 'bookkeeping'."

**High Intangible Savings** Bossert Manufacturing Company: "We conservatively estimate our intangible savings at \$1,000 per month. These include closer coordination between our maintenance department, tool room foreman, timekeeping and payroll sections, and our shipping room. We also estimate a monthly savings of \$500 due to improvement of our supervisory personnel performance, and an estimated 5% savings in indirect labor hours and a 2½ % savings in direct labor hours because operators now stay at their machines."

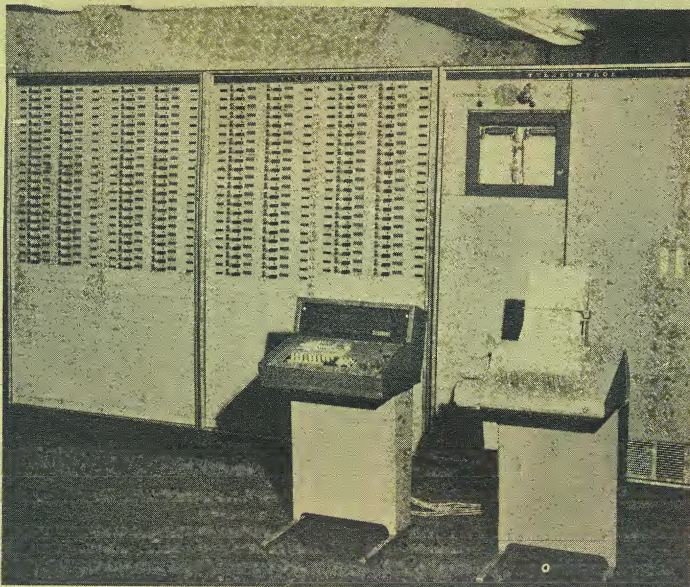


## Telecontrol is now available in Series 2100 Electromechanical and Series 4100 Electronic Configurations

Telecontrol custom-programmed computer systems are designed in compatible electromechanical and electronic versions. They both provide the same efficient manufacturing control capabilities through work station sensors, work station communication/signalling terminals, and central information display console. The 4100 system electronically stores on a magnetic drum, displays and prints out any desired production data for immediate review and action by management. A wide range of

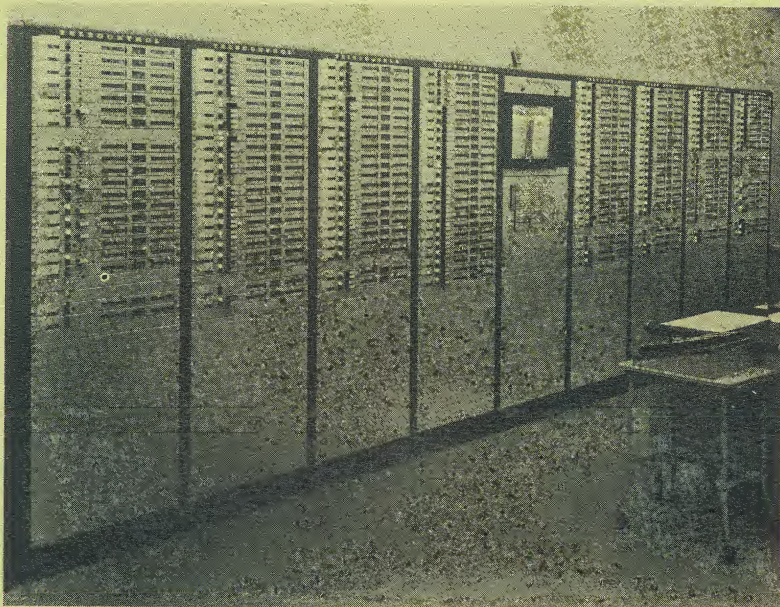
standard data processing devices — printers, punched card and paper tape units, magnetic tape drives, and digital computer central processors — can all be linked compatibly with the 4100. This permits rapid processing of production data.

Some users can start with the basic 2100 system and, as the total data collection and processing system grows, convert to the more flexible, more powerful 4100 system.



*The standard 4100 System includes the Count Sensor Device and Machine Control Terminal installed at each work station for counting production and informing the Telecontrol center of stoppages. The Data Storage Unit electronically stores all production data and other data entered through the Master Console for immediate display or transfer to output devices. The Display Cabinet presents visually the status data on each work station, such as operating status, requests for assistance, job completion, employee number and job assignment. The Master Console controls the entry, display and output of all production data stored in the Data Storage Unit.*

*The Data Output Unit, such as this conventional printer, prints out hard copy of any desired on-line production data as specified by the operator of the Master Console. Many other standard devices, from punched card to on-line computer central processors, can be used as data output devices for the 4100 System.*



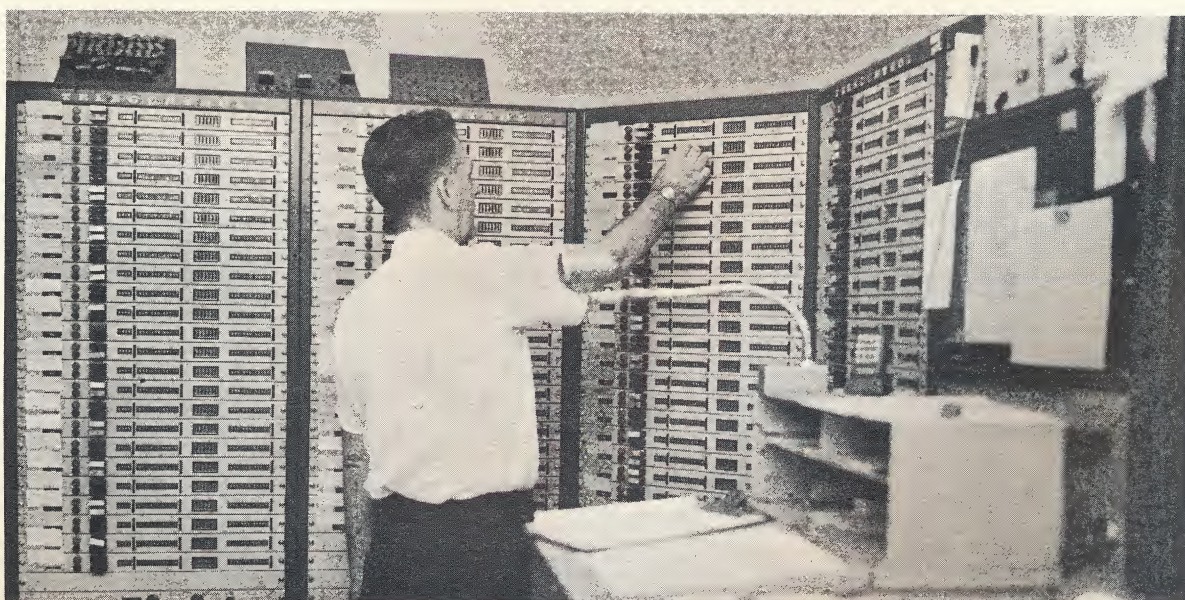
*This basic 2100 Control Panel records and displays, on electromechanical counters, the operating status of each production machine. It displays productive time, downtime, number of parts produced, balance of job uncompleted, employee code and job assignment. Data is recorded manually for subsequent input into the processing system.*



**TELECONTROL IN THE  
FOUNDRY INDUSTRY** — At  
Albion Malleable Iron Co.,  
Albion, Mich., Telecontrol work  
stations are installed at 146  
machines. After only two months  
of operation, installation of the  
Telecontrol System reduced  
production downtime by 55.3%  
in Grinding, 27.9% in Press,  
16.4% in Core, and 3.5% in Mold  
— an average of over 17%  
plant-wide. Greatest savings  
occurred in "outlying"  
departments; but also manpower  
in Timekeeping was reduced,  
production communication  
improved, planning and  
scheduling efficiency increased.



**TELECONTROL IN THE  
RECORD PRODUCTION FIELD**  
— At CBS-Columbia Records  
plant in Pitman, N.J., world's  
largest producer of LP records, a  
Telecontrol system controls the  
operation of 90 record-stamping  
presses which produce 300,000  
records daily for general release,  
record clubs, private labels and  
radio transcriptions. The system  
returned its original investment  
in just over one year.







**TELECONTROL IN THE DATA PROCESSING INDUSTRY** — A Telecontrol 2100 system at the Univac Division, Sperry-Rand Corporation, Ilion, N.Y., controls the production by 319 machines of parts for Univac data processing systems. The 2100 is integrated with an in-plant Univac 1004 computer to handle job orders, scheduling, stock deliveries, direct labor, inspection and tool work.

**TELECONTROL IN THE TABLEWARE FIELD** — This Telecontrol system at the Anchor Hocking plant in Lancaster, Ohio, operates at full capacity on three shifts, 7 days weekly, in production, maintenance and service activities. With a special emphasis on quality control, it counts tableware produced, rejects (by reason), and cases packed and is integrated with operations covering carton assembly, decorating and heat treat.



## Total Systems Service with Telecontrol

A complete range of systems service is provided with Telecontrol. A staff of specialists is available to conduct preliminary plant surveys and make recommendations especially for

your operation. They will also supervise installation of a Telecontrol system and train company personnel in its operation. Regularly scheduled service and maintenance is provided.



## **Here are some of the Companies now using Telecontrol**

**Albion Malleable Iron Company  
Anchor Hocking Glass Corporation  
Bendix Corporation  
Columbia Broadcasting System  
Corning Glass Works  
Dana Corporation  
Federal-Mogul Corporation  
Ford Motor Company  
General Electric Company  
General Motors Corporation  
Hoover Ball and Bearing Company  
Johns-Manville Products Corporation  
Ladish Company  
Joseph Lucas Company, Ltd.  
Maytag Company  
National Lead Company  
Phelps Dodge Corporation  
Rexall Corporation  
Samsonite Corporation  
A. O. Smith Corporation  
Screw and Bolt Corporation  
SKF Industries  
Sperry Rand Corporation  
Sunbeam Corporation  
Sylvania Electric Corporation  
Westinghouse Electric Corporation  
Whirlpool Corporation**

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**TELECONTROL**  
**CORPORATION**



# BASIC TELECONTROL SYSTEMS

## SERIES 2100

**Electromechanical Production Monitoring System.** Provides basic management control of manufacturing facilities. Readout via visual counters and strip-chart recorders. Especially suited for smaller manufacturing operations.

## SERIES 4100

**Electronic Production Monitoring System.** Provides complete management control of manufacturing facilities. Links all work stations to central memory unit, maintains constantly updated production data. Whenever desired, can interface with all data processing equipment and provide rapid hard copy printout.

## SERIES 5100

**Datametric Instrumentation.** Data collection and display components, including Utilization Monitor, Product-Corder, Computer Monitor, and various types of sensing devices.

## SERIES 6100

**Electronic Data Recording Equipment.** Collects, transmits and prepares information for data processing systems.

## SERIES 7100

**Maintenance Control System.** Central control and display of indirect labor status where production piece count is not a factor.

## SERIES 8100

**Universal Electronic Controller.** Versatile control system for such applications as automatic television program monitoring and control.

*See this page for  
complete listing of all*

**TELECONTROL** systems.





Display Cabinet (Series 4100)

## BASIC COMPONENTS

Since no two clients face exactly the same problems, no two Telecontrol systems are ever identical. Telecontrol should be thought of as a **systems concept**.

Each Telecontrol system employs standard modular units, pre-engineered and proven reliable in over one hundred installations. Some of the more important and commonly used Telecontrol units are illustrated here.



Work Station Terminal  
(Series 2100 & 4100)



Display Panel (Series 2100)

## THE COMPANY AND ITS CLIENTS

*The Telecontrol Division of Hancock Telecontrol Corporation is devoted exclusively to the manufacture of data handling and control systems.*

*The Division employs a staff of specialists trained to apply and install the Telecontrol concept in all industrial production situations. These specialists are also in charge of the preliminary plant survey which determines the Telecontrol configuration to be used.*

*In addition to consultation and preliminary application studies, the Division performs these basic services:*

- 1. Supervises installation of the Telecontrol system*
- 2. Trains in-plant personnel in the operation of the system*
- 3. Provides regularly scheduled service and maintenance for clients under a service contract*

Telecontrol systems are now in full-time use at these companies plus many others:

Albion Malleable Iron Company  
Anchor Hocking Glass Corporation  
Armstrong Rubber Company  
Bendix Corporation  
Columbia Broadcasting System Inc.  
Dana Corporation  
Federal-Mogul-Bower Bearings Inc.  
Ford Motor Company  
General Electric Company

General Motors Corporation  
Johns-Manville Products Corporation  
Ladish Company  
National Lead Company  
Phelps Dodge Corporation  
Shwayder Brothers Inc.  
Sperry Rand Corporation  
Sunbeam Corporation  
United Shoe Machinery Corporation



**TELECONTROL** DIVISION

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